

REMARKS

Claims 1, 7-9, 15-17, 21, 22, and 26 remain pending and have been rejected. Claims 2-6, 10-14, 18-20, and 23-25 have been canceled. Independent claims 1 and 9 have been amended to include the subject matter of now-canceled claims 2-6 and 10-14, respectively, and independent claims 17 and 22 have been amended to include the subject matter of now-canceled claims 18-20 and 23-25, again respectively. No claims have been added. Applicant respectfully submits that no new matter has been added to the application by the Amendment.

Applicant respectfully requests reconsideration and withdrawal of the rejection of the claims consistent with the following Remarks.

§ 101 Rejection

The Examiner has rejected the claims under 35 U.S.C. § 101 as being non-statutory subject matter. Applicant respectfully traverses the § 101 rejection insofar as it may be applied to the claims as amended.

Applicant has amended the independent claims of the application to recite that the methods therein are performed with regard to a computing device, and in particular with regard to a file system of a computing device. Such a computing device is disclosed in the present application at least in connection with Fig. 1. Inasmuch as such a computing device is tangible, Applicant respectfully submits that the claims satisfy the tangible requirement and set forth a practical application. As a result, Applicant respectfully requests reconsideration and withdrawal of the § 101 rejection.

§ 103(a) Rejections

The following claim rejections have been asserted by the Examiner under 35 U.S.C. § 103(a):

- Claims 1, 7, 9 and 15 as being obvious over Reiter (U.S. Patent No. 5,752,243) in view of Bumbulis (U.S. Publ. No. 2003/0204513);
- Claims 2-4, 10-12, 17, 18, 21, 22, and 26 h as being obvious over Reiter in view of Bumbulis and further in view of Rao (U.S. Patent No. 5,689,706);

- Claims 5, 6, 13, and 14 as being obvious over Reiter in view of Bumbulis and further in view of Li et al (U.S. Publ. No. 2002/0198891);
- Claims 8 and 16 as being obvious over Reiter in view of Bumbulis and further in view of Cheng et al (U.S. Patent No. 5,204,958) and Beyer et al (U.S. Publ. No. 2006/0173927); and
- Claims 19, 20, 24 and 25 as being obvious over Reiter in view of Bumbulis and further in view of Rao and Li.

However, Applicant notes again that independent claims 1 and 9 have been amended to include the subject matter of now-canceled claims 2-6 and 10-14, respectively, and independent claims 17 and 22 have been amended to include the subject matter of now-canceled claims 18-20 and 23-25, again respectively. In addition, such independent claims have also been amended to emphasize that the B-tree represents a file system of a computing device such that the directory is represented as the B-tree. Accordingly, none of the claims as amended includes exactly the same subject matter as any of the claims prior to amendment. Nevertheless, Applicant respectfully traverses the § 103(a) rejections insofar as they may be applied to the claims as amended.

Applicant respectfully points out that independent claim 1 as amended recites a method of changing values of a range of consecutive keys in an original B-tree. In the method, the range of consecutive keys is excised from the original B-tree, which represents a file system, where renaming an element of the file system requires the changing of the values of the range of consecutive keys.

Notably, claim 1 as amended also recites that the original B-tree represents a hierarchical namespace of a file system of a computing device, and the range of consecutive keys belong to a directory of the file system such that the directory is represented as the B-tree. Thus, the changing of the values of the range of consecutive keys is in connection with the directory being renamed. Each key in the original B-tree contains a pathname for a file or directory of the file system prior to the renaming of the directory.

Independent claim 9 recites subject matter similar to that of claim 1 although in the form of a computer-readable medium. Independent claim 17 recites subject matter similar to that of claim although somewhat more broadly. Finally, independent claim 22 recites subject matter similar to that of claim 17 although in the form of a computer-readable medium.

As was previously pointed out, Reiter is directed to storing and accessing multidimensional data using a multi-dimensional B-tree. When a unit of data is too large to be stored in a single page, a tree manager splits a node or a unit of sub-data into a sub-node and a sub-tree. The sub-tree is stored on a new page. If the unit of sub-data cannot be split into a sub-node and a sub-tree, then one or more of the nodes currently stored on the page are moved to a new page. However, and again, Reiter does not address renaming elements of a directory represented as a B-tree, as recited by Applicant's amended claims, and in particular does not rename such elements in the manner set forth in claims 1, 9,17, and 22.

As was also previously pointed out, Bumbulis is directed to the creation of a B-tree index for a Database Management System (DBMS). Here, the index is not the recited directory in the claims, and at any rate such index is not ever renamed, such as would trigger the method recited in the claims. In particular, an index is used to enable specific records to be located faster and to be sorted more easily, not to find and manage hierarchically arranged elements by pathname. Thus, Bumbulis like Reiter fails to address renaming elements of a directory represented as a B-tree, as recited by Applicant's amended claims, and in particular does not rename such elements in the manner set forth in claims 1, 9,17, and 22

Rao is directed to synchronization of sequential read and write operations using tokens in a loosely connected distributed system. Thus, Rao like Bumbulis and Reiter fails to address renaming elements of a directory represented as a B-tree, as recited by Applicant's amended claims, and in particular does not rename such elements in the manner set forth in claims 1, 9,17, and 22.

Li is directed to an extensible structure for software modules that can be used to construct an object-oriented extension of a DBMS. Again, like the previously discussed references, Li fails to address renaming elements of a directory represented as a B-tree, as recited by Applicant's amended claims, and in particular does not rename such elements in the manner set forth in claims 1, 9,17, and 22.

Cheng like Bumbulis is directed to using a B-tree for a DBMS index. Again, an index is not akin to a file system directory because an index does not require a rename operation. Thus, and again, Cheng fails to address renaming elements of a directory represented as a B-tree, as recited by Applicant's amended claims, and in particular does not rename such elements in the manner set forth in claims 1, 9,17, and 22.

Beyer is directed to an extensible identification system where each node in a hierarchy is assigned concatenated decimal values so that the order of a node and its parent child sibling relationships can be determined. Thus, and again, Beyer does not disclose or suggest renaming elements of a directory represented as a B-tree in the manner recited in claims 1, 9, 17, and 22.

Moreover, and at any rate, inasmuch as none of the aforementioned references addresses renaming elements of a directory that is represented as a B-tree, such references even if combined would not teach or suggest such renaming in the manner recited in the claims of the present application. Accordingly, Applicant respectfully submits that no combination of the aforementioned references can be construed to make obvious claims 1, 9, 17, and 22, or any claims depending therefrom. As a result, Applicant respectfully requests reconsideration and withdrawal of the § 103 rejections of the claims of the present application.

Conclusion

In view of the foregoing Amendment and Remarks, Applicant respectfully submits that the present Application is in condition for allowance and such action is respectfully requested.

Respectfully submitted,

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